

separating from the mixture of immiscible phases at least a first organic liquid of low density comprising hydrocarbons, oxygenated organic compounds and acidic co-products, and second liquid of high density which contains at least portions of the catalyst metal, water of reaction and acidic co-products;

*B1* wherein the organic feedstock comprises nitrogen containing organic compounds of which at least a portion is oxidized in the liquid reaction medium, and wherein the second separated liquid is an aqueous solution containing at least a portion of the oxidized nitrogen-containing organic compounds.

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**Please replace Claim 2 with the following**

*B2* The process according to Claim 1, wherein the organic feedstock comprises sulfur-containing organic compounds one or more of which are oxidized in the liquid reaction medium, and wherein the second separated liquid is an aqueous solution containing at least a portion of the oxidized sulfur-containing organic compounds.

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**Please replace Claim 11 with the following:**

11. A process for the production of refinery transportation fuel or blending components for refinery transportation fuel, which process comprises:

partitioning by distillation an organic feedstock comprising a mixture of organic compounds derived from natural petroleum, the mixture having a gravity ranging from about 10° API to about 100° API to provide at least one low-boiling organic part consisting of a sulfur-lean, mono-aromatic-rich fraction, and a high-boiling organic part consisting of a sulfur-rich, mono-aromatic-lean fraction;

*B3* contacting a gaseous source of dioxygen with at least a portion of the low-boiling organic part in the liquid reaction medium containing a soluble catalyst system comprising a source of at least one catalyst metal selected from the group consisting of manganese, cobalt, nickel, chromium, vanadium, molybdenum, tungsten, tin, cerium, or mixture thereof, while maintaining the liquid reaction medium substantially free of halogen and/or halogen-containing compounds, to form a mixture of immiscible phases comprising hydrocarbons, oxygenated organic compounds, water of reaction, and acidic co-products;

separating from the mixture of immiscible phases at least a first organic liquid of low density comprising hydrocarbons, oxygenated organic compounds and acidic co-products, and second liquid of high density which contains at least portions of the catalyst metal, water of reaction and acidic co-products; and

contacting all or a portion of the separated organic liquid with a neutralizing agent thereby recovering a low-boiling oxygenated product having a low content of acidic co-products;

wherein the organic feedstock comprises nitrogen containing organic compounds of which at least a portion is oxidized in the liquid reaction medium, and wherein the second separated liquid is an aqueous solution containing at least a portion of the oxidized nitrogen-containing organic compounds.

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**Please replace Claim 21 with the following**

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The process according to Claim 1, wherein the organic feedstock comprises sulfur-containing organic compounds one or more of which are oxidized in the liquid reaction medium, and wherein the second separated liquid is an aqueous solution containing at least a portion of the oxidized sulfur-containing organic compounds.

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